REMARKS

The Office Action dated July 6, 2007 has been carefully considered and is appreciated. For the reasons discussed below in more detail, the Applicant respectfully traverses the rejections, and it is believed that this application is in condition for allowance. Accordingly, favorable reconsideration of the pending application is respectfully requested in view of the foregoing amendments and the following remarks.

Status of the Application

Claims 1-44 are currently pending, with claims 1, 2, 7, 13-16, 18, 21, 24, 27, 32-37, 41, and 44 being amended. Claims 8, 10-12, 19, 20, 28, 30, 31, 38-40, 42, 43 are canceled without prejudice. As the subject matter of the amended claims is fully supported by the application as filed, no new matter has been introduced into the Application by way of these amendments.

Summary of the Office Action

Claims 8 and 28 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1-3 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,044,150 to Rigstad et al. (hereinafter "Rigstad"). Claims 4, 5, 7, and 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rigstad in view of U.S. Patent No. 6,912,401 to Rosen et al. (hereinafter "Rosen"). Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rigstad in view of U.S. Patent No. 5,550,893 to Heidari (hereinafter "Heidari"). Claim 8 is rejected under 35 U.S.C. 103(a) as being upatentable over Rigstad in view of Rosen and in further view of U.S. Patent No. 6,154,530 to Letellier (hereinafter "Letellier"). Claims 21-24 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,999,783 to Toyryla et al. (hereinafter "Toyryla") in view of Rigstad. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toyryla in view of Rigstad and in further view of Heidari. Claims 26, 27, 29-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyryla in view of Rigstad and in further view of Rosen. Claim 28 is rejected under 35 U.S.C 103(a) as being unpatentable over Toyryla in view of Rigstad in view of Rosen and in further view of Letellier. Claims 43 and 44 are rejected under 35 U.S.C 103(a) as being unpatentable over Rigstad in view of Rosen.

Discussion

The subject matter of the present Application pertains generally to a system and method for talker arbitration based, in part, on prospective and/or current talker speech energy levels so as to remove the need for a user to push a separate button before commencement of speech. More particularly, in addition to receiving speech energy levels corresponding to current and prospective talkers (or a plurality of prospective talkers), independent claims 1, 21, and 44, as amended, recite: (a) receiving (or determining or maintaining) dynamic priority levels corresponding to each talker, (b) weighting the speech energy level for each talker by corresponding dynamic priority level, where (c) the dynamic priority level is based on a number of times a talker has been granted floor control. As discussed in more detail below, none of the cited references teach, expressly or inherently, weighting the speech energy level of each talker by a dynamic priority level which is based on a number of times a talker has been granted floor control. In other words, none of the cited references teach, expressly or inherently, floor control arbitration based on weighting a talker's speech energy by a ***dynamic priority level which is based on a number of successful floor control attempts***. Specifically, Rigstad relies entirely on speech energy to grant floor control and is silent as to the use of any kind of priority levels for talker arbitration. The arbitration scheme of Rosen, on the other hand, does not take into account speech energy levels and does not rely on the number of successful floor control attempts for the arbitration decision. Furthermore, Toyryla is silent as to arbitration control and, instead deals with user-defined communication groups. Likewise, Letellier describes a call-back priority index for unsuccessful callers for the purpose of a one-on-one call-back communication and is unrelated to talker arbitration in half-duplex communication sessions. Finally, Heidari deals with speech compensation in dual-mode telephones and is likewise silent as to talker arbitration schemes, including speech energy levels weighted by dynamic priority levels based on the number of successful floor control attempts or otherwise.

INDEPENDENT CLAIMS 1, 21, 44

Independent claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Rigstad. Claim 1 is reproduced below as follows:

1. A method for talker arbitration, comprising:

receiving speech energy levels corresponding respectively to a current talker and a prospective talker in a communication session;

receiving dynamic priority levels corresponding respectively to said current and prospective talkers;

selecting said prospective talker based on comparing said speech energy level of said prospective talker to said speech energy level of said current talker by weighting said speech energy levels by said corresponding dynamic priority levels;

granting said selected prospective talker floor control of said communication session; and

wherein each of said dynamic priority levels is based on a number of times each of said talkers has been granted floor control.

As amended, claim 1 is generally directed to talker arbitration wherein the floor control is granted to a given talker by taking into account the talker's speech energy level weighted by the talker's dynamic priority level which, in turn, is based on the number of times the talker has been granted floor control. Specifically, claim 1 recites (a) "receiving dynamic priority levels corresponding respectively to said current and prospective talkers," (b) "weighting said speech energy levels by said corresponding dynamic priority levels," where (c) "each of said dynamic priority levels is based on a number of times each of said talkers has been granted floor control." *See* Application at p.8. As explained in the Application, the dynamic priority level is used as an override mechanism to ensure that naturally loud talkers do not always gain floor control. *See* Application at p. 8. Therefore, to ensure access to the floor to other talkers, the dynamic priority level is based on a number of times each talker has been granted floor control, or, in other words, based on a **number of prior *successful* floor control attempts** by each talker. Application, p.8. For example, "each time a particular PoC session participant gains floor control, the PoC session participant's dynamic priority level is reduced." *See* Application at p.8. Thus, in order to equalize the floor control among a number of talkers, each talker's speech energy level is weighted by a dynamic priority level described above, for example by modifying each talker's speech energy value by their corresponding dynamic priority value and comparing the respective modified, or weighted, speech energy values among all talkers. *See* Application at p.8.

Rigstad describes a speakerphone that monitors received audio signal energy levels for making half-duplex switching decisions. *See* Rigstad, Abstract; col. 9, ll. 46-49. If the remote

party's voice energy exceeds a predetermined threshold, then such party retains use of the channel and precludes the host from entering the conversation. Rigstad, col. 10, ll. 3-10. However, Rigstad relies solely on speech/voice energy monitoring for making half-duplex switching decisions and does not use priority levels for floor control. Therefore, contrary to requirements of claim 1, Rigstad does not, expressly or inherently, teach "weighting said speech energy levels by said corresponding dynamic priority levels" where "each of said dynamic priority levels is based on a number of times each of said talkers has been granted floor control."

Independent claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toyryla in view of Rigstad. Claim 21 is a system claim, which, similar to claim 1, also includes "speech energy levels weighted by dynamic priority levels " maintained for the current and prospective talkers where "each of said dynamic priority levels is based on a number of times each of said talkers has been granted floor control." *See* Application at p.8. As discussed above, Rigstad is silent regarding the use of priority levels for floor control decisions. Toyryla teaches a user-definable talk group by way of a group definition message distributed to intended group members' subscriber stations. *See* Toyryla, Abstract, Figures 2 and 3; col. 4, ll. 4-15. The group definition message of Toyryla, however, serves to define user access rights for participation in a group communication session, but not to provide talker arbitration among the participating group members. *See* Toyryla, Figure 3, elements 302, 306. More importantly, Toyryla and Rigstad, either alone or in combination, do not expressly or inherently teach or suggest arbitration control based on speech energy levels weighted by dynamic priority levels that are based on the number of times each talker has been granted floor control.

Independent claim 44 is rejected under 35 U.S.C 103(a) as being unpatentable over Rigstad in view of Rosen. As amended, claim 44 recites weighting the speech energy levels of each of the plurality of prospective talkers by their static and dynamic priority levels. *See* Application at p. 9. Similar to claims 1 and 21, the dynamic priority level of claim 44 is "based on a number of times each of said plurality of prospective talkers has been granted floor control." *See* Application at p.8. In other words, the dynamic priority level is based on a **number of *successful* floor control attempts** by each talker. As stated in the Office Action, and as discussed above, Rigstad does not disclose the use of static or dynamic priority levels for floor control decisions. *See* Office Action dated July 6, 2007 at p. 19. Furthermore, unlike the

dynamic priority level that is based on the number of times a talker has successfully acquired floor control, Rosen employs an arbitration scheme where "***unsuccessful*** attempts to gain transmission privilege" are used in the arbitration decision. *See* Rosen, col. 3, ll. 54-67; Office Action dated July 6, 2007 at p. 19. Thus, while the dynamic priority level of the Application is used as an override mechanism to ensure that talkers with naturally high speech energy levels do not dominate the floor by reducing the weighted speech energy level with increased successful floor control attempts, Rosen instead employs unsuccessful floor control attempts to facilitate a talker's ability of prevailing in obtaining floor control. *See* Application at p.8 (stating that "each time a particular PoC session participant gains floor control, the PoC session participant's dynamic priority level is reduced."). Finally, Rosen is silent as to the nature of its "priority levels."

The remaining references, Letellier and Heidari, do not, singly or in combination, remedy the above deficiencies of Rigstad, Toyryla, and Rosen and likewise do not expressly or inherently teach or suggest talker arbitration based on speech energy levels weighted by dynamic priority levels that are based on the number of times a talker has been granted floor control.

DEPENDENT CLAIMS 2-7, 9, 13-18 and 22-27, 29, 32-37, 41

Dependent claims 2-7, 9, 13-18 and 22-27, 29, 32-37, 41 incorporate all of the requirements of their respective independent claims 1 and 21 and, therefore, are also patentable for at least the same reasons.

Conclusion

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

/Phillip M. Pippenger/
Phillip M. Pippenger, Reg. No. 46,055
LEYDIG, VOIT & MAYER, LTD.
Two Prudential Plaza, Suite 4900
180 North Stetson Avenue
Chicago, Illinois 60601-6731
(312) 616-5600 (telephone)
(312) 616-5700 (facsimile)

Date: October 5, 2007